

CATHETER WITH FLUORESCENT TEMPERATURE SENSOR

ABSTRACT OF THE DISCLOSURE

A catheter with a fluorescent temperature sensor is shown and described.

5 The catheter includes a lumen, a fiber-optic cable that extends through the lumen.
A distal end of the fiber-optic cable is coated with a fluorescent material and a
proximal end of the fiber-optic cable is connected to a console. The console
includes a light source for transmitting light through the fiber-optic cable for
exciting the fluorescent material. The console further includes a photo multiplier
10 tube for converting light emitted by the excited fluorescent material to a plurality of
analogue voltage signals. The console further includes a digital oscilloscope linked
to the photo multiplier tube for converting the plurality of analogue voltage signals
to at least one digital signal. The console further includes a processor linked to the
digital oscilloscope for converting the at least one digital signal to a temperature
15 value for the distal end of the fiber-optic cable.